

Title (en)  
WIRELESS DATA TRANSCEIVER

Title (de)  
Drahtloser Datensendeempfänger

Title (fr)  
EMETTEUR-RECEPTEUR DE DONNEES SANS FIL

Publication  
**EP 0697155 B1 19980715 (EN)**

Application  
**EP 94915937 A 19940428**

Priority  
• US 9404698 W 19940428  
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• US 15040193 A 19931110

Abstract (en)  
[origin: WO9426049A2] A full duplex data transceiver for transmitting and receiving trinary frequency-modulated ("FM") signals representing binary data includes at least one antenna and a single oscillator which serves as both the radio frequency ("RF") signal source for the transmitter and the local oscillator ("LO") signal source for the receiver. During signal transmission, the oscillator output is frequency-modulated to provide an FM transmit signal to the antenna. The oscillator output is frequency-modulated with binary transmit data by modulating an error feedback signal which serves as the control voltage for a voltage-controlled oscillator in a phase-lock-loop, thereby producing the FM transmit signal. During signal reception, the oscillator output, in the form of the transmitted FM signal, is attenuated and coupled into the receiver along with an FM receive signal from the antenna, or alternatively is received via a separate receive antenna along with the FM receive signal, for mixing therewith to down-convert the FM receive signal. As part of the demodulation of the down-converted FM receive signal, the binary transmit data is subtracted out. The FM transmit and receive signals are trinary (f-P, fC, f+P) and represent encoded binary data. The center frequency fC corresponds to an absence of a binary data signal transition, the lower peak frequency f-P corresponds to a negative binary data signal transition and the upper peak frequency f+P corresponds to a positive binary data signal transition.

IPC 1-7  
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